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June 1977
NSRP 0003

THE NATIONAL SHIPBUILDING RESEARCH PROGRAM

Proceedings of the REAPS Technical Symposium

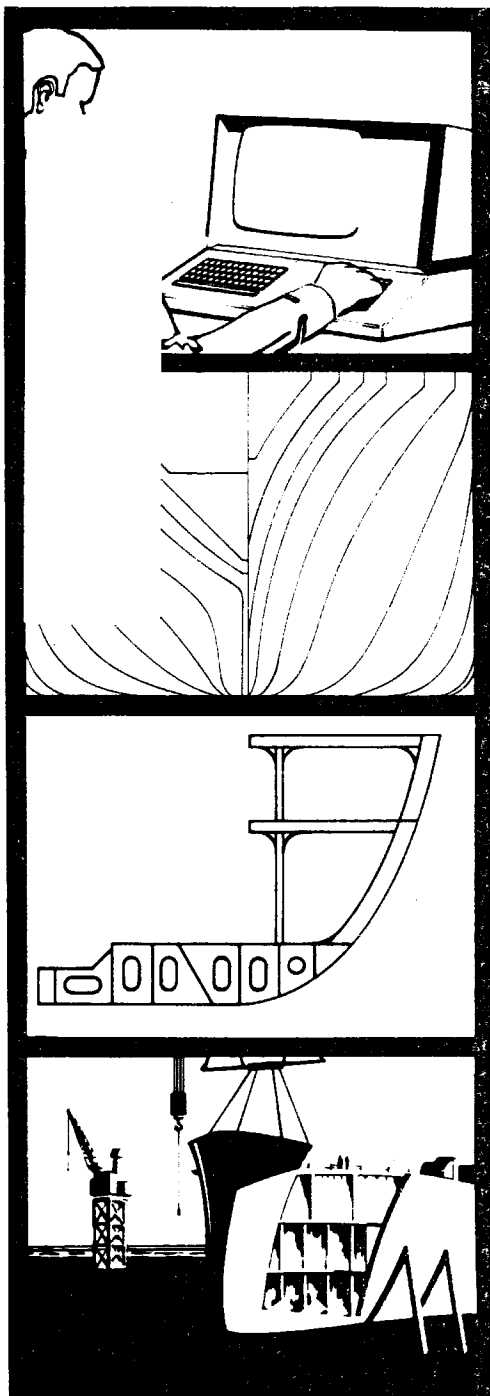
Paper No. 12: On-Line Data Entry at Port Weller

U.S. DEPARTMENT OF THE NAVY
CARDEROCK DIVISION,
NAVAL SURFACE WARFARE CENTER

Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE JUN 1977		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE The National Shipbuilding Research Program: Proceedings of the REAPS Technical Symposium Paper No. 12: On-Line Data Entry at Port Weller				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Surface Warfare Center CD Code 2230 - Design Integration Tools Building 192, Room 128 9500 MacArthur Blvd Bethesda, MD 20817-5700				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 9	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

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SHIPBUILDING

**Proceedings of the
REAPS Technical Symposium
June 21-22, 1977
New Orleans, Louisiana**

ON-LINE DATA ENTRY AT PORT WELLER

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Mr. Harkey is Computer Systems Manager responsible for the AUTOKON system, N/C programming and system development. In the past, he has been loft superintendent, N/C supervisor and an N/C programmer.

In March of 1976, the decision was made at Port Weller Dry Docks to purchase an in-house computer system to expand our use of computer programs and to update our present systems. At that time two systems were in operation at Port Weller. The accounting and labor distribution programs were executed on a Litton-McBee paper tape oriented computer system, and the production planning and control, numerical control, and design programs were executed on a UNIVAC 1108 time sharing system using a remote batch terminal for data transmission.

Once the decision had been made to purchase the new computer system, an analyst with a broad knowledge of systems hardware and software was hired by Port Weller to purchase and implement the system. After about three months of investigating different systems, the decision was made to purchase a Varian model V-76 computer.

The new system had to be capable of multi-processing COBOL and FORTRAN application programs, simultaneous Univac communications, and on-line data entry. The Varian was chosen because it met these criteria, and its cost was within Port Weller's budget.

The following are some of the features of the new system:

- .128K words memory
- .2 pages writeable control storage
- . floating point processor
- .93.4 million character disk storage
- .9-track magnetic tape unit
- .600 line per minute printer
- .75 CPS paper tape punch
- .COBOL and FORTRAN compilers
- .1004 emulation
- 7 CRT's for on-line data entry

At the present time we have CRT's located in five different departments at Port Weller:

- Production Planning and Control
- Estimating and Design
- Stores Inventory Control
- Computer Systems
- Mold Loft

Production Planning and Control uses the CRT for creating, correcting, and updating local files for transmission to the Univac 1108 for processing the Material Requirement planning System and the weekly production progress report programs. The Estimating and Design Department also uses the CRT for editing their files for submission to the 1108 to process their ship design and calculation programs.

Stores Inventory Control uses an entirely different concept for entering data to their disc files. The ADD, REPLACE, DELETE and FIND commands are used to make the appropriate changes to their data base.

Computer systems programmers use the CRT for debugging application programs and for looking at files of other users to give assistance with user problems.

Input to AUTOKON programs is handled the same as card input. Once the AUTOKON program has been punched, the programmer is given an 80/80 listing of his program for validation. If there are corrections or changes to be made to the manuscript, he/she simply makes the change on the listing and returns it to the data entry operation for updating the file.

The addition of software for accounting and labor distribution is now in progress and will be implemented in January, 1978. That department will have a line printer and a CRT for their input and output.

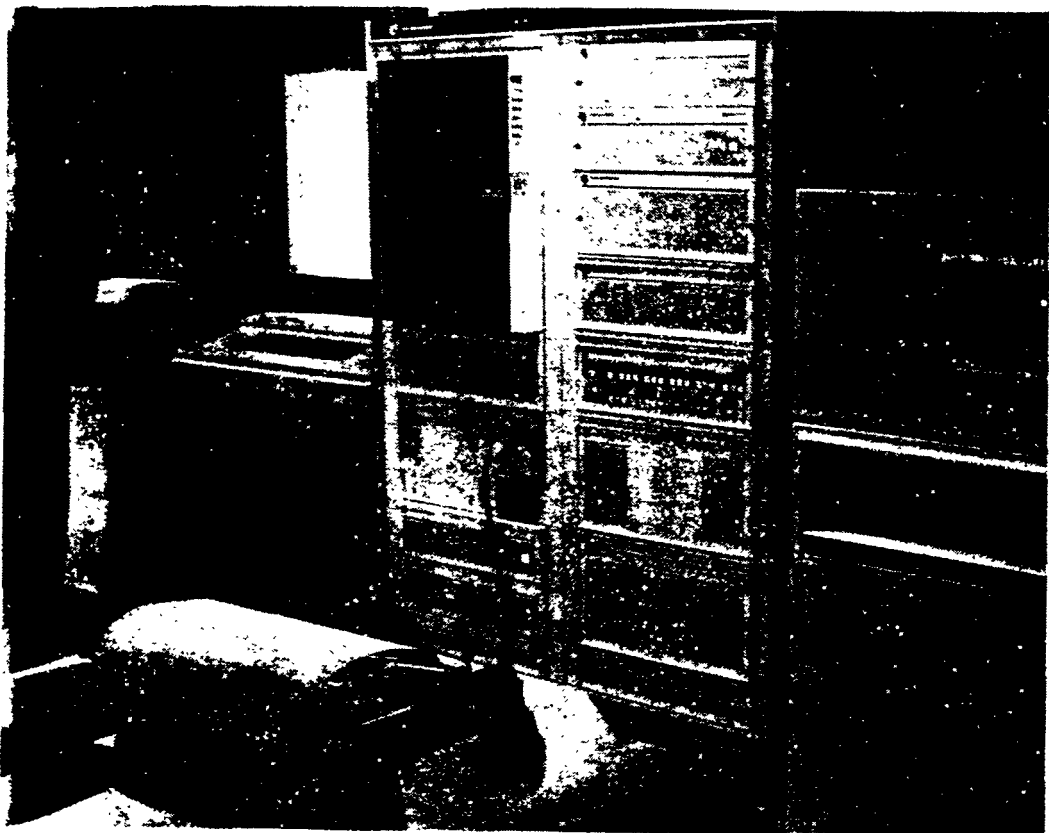
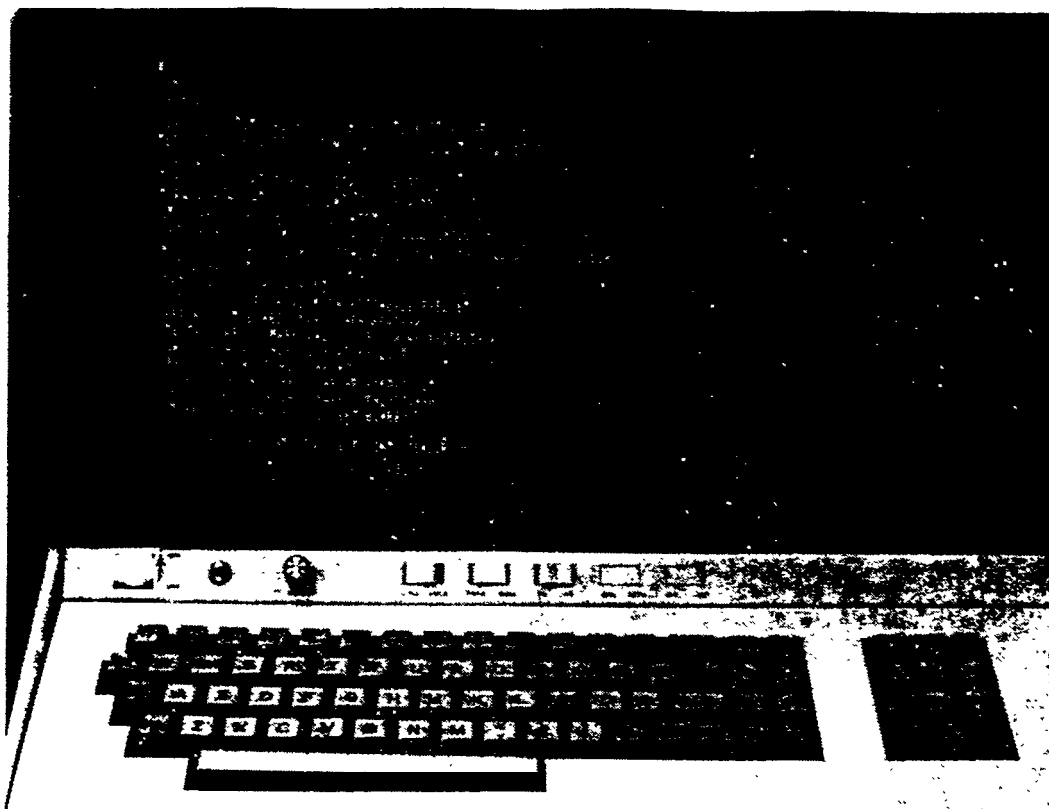
The text editor is an essential tool in on-line data entry. With the editor, we have the capability of creating, deleting, correcting, concatenating and queuing files to be submitted for execution on the Varian or transmitted to the Univac 1108.

In editing an existing file, we have the following options:

- Deleting a specified number of lines
- Replacing a string of text within a line
- Finding a string of text in a file
- Moving the cursor forward or reverse a specified number of lines
- Adding a line of text
- Tabulating
- Displaying column numbers
- Changing the file name
- Listing a file by each line or page, or in its entirety
- Permanently storing or aborting the file.

The use of on-line data entry to permanent disc files has proven to be faster and more efficient for handling computer programs. It has eliminated the need for massive storage files necessary for storing punched cards. We have also eliminated the mechanical card punch and card reader and replaced them with the electronic CRT.

We at Port Weller believe that our new computer system has greatly improved our-computing capabilities. We do not pretend, however, that this is the ultimate for ourselves, and we will continue to investigate new ways to enhance our use of computers in production, accounting, and management.



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